## REMARKS

### Status of the Claims

- Claims 1-25 are pending in the Application after entry of this amendment.
- Claims 1-25 are rejected by the Examiner.
- Claims 1, 15, and 25 are amended by Applicant.

### Claim Rejections Pursuant to 35 U.S.C. §103

Claims 1, 3, 5-7, 9-14, and 25 stand rejected pursuant to 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 6,182,086 to Lomet et al. (Lomet) in view of U.S. Patent No. 5,884,327 to Cotner et al. (Cotner). The Applicant respectfully traverses the rejection.

Lomet teaches a client-server computer system having one or more clients connected to one or more servers, and techniques for capturing client-server interactions to enable recovery of client-side applications following system crashes. As stated in Lomet col. 4, lines 58-64:

"Both the server and the client have a volatile main memory with a log buffer, a non-volatile memory with a stable log, and a processing unit. Both the client and server have their own independent recovery systems which adequately recover database records and application states for applications that do not involve client-server interactions." (Lomet, col. 4, lines 58-64).

Thus, Lomet teaches a client that has a log buffer device built into the client. The server also has a log buffer built into the server.

The present Office Action dated 9/6/07 attempts to couple the teachings of Lomet with that of Cotner to arrive at the integrated system of Claim 1. However, elements of Claim 1 prohibit the combination of Lomet and Cotner from being functional. Specifically, amended Claim 1 recites, among other things:

Claim 1:       "A system for optimizing recovery logging, the system comprising:

              a log storage device on a calling component machine;

a calling component module on the calling component machine, the calling component module adapted to sending a first message to a called component…, wherein a contract between the calling component module and the called component requires the called component to guarantee persistence of its last return message to the calling component module…, *wherein the calling component sends the first message without logging the first message to the log storage device*, and wherein the calling component module is adapted to sending a second message to the called component, *and logging a return message to the log storage device when the second message to the called component is sent, wherein logging of the return message is an only forced logging event on the calling component module* …; and

a called component table on the calling component machine for storing information associated with the return message." (Part of pending Claim 1).

Applicant notes that Claim 1 recites that the calling component has a log storage device. According to an aspect of the claimed invention, the calling component acts to reduce the number of forced log writes required to the log storage device (See paragraph 0004 of the as-filed specification). One aspect of Claim 1 indicates that *the calling component sends the first message without logging the first message to the log storage device*. This saves a write to the log device of the calling component. It is only after sending a second message that the return message is logged into the log storage device of the calling component.

Cotner teaches a different scheme. Cotner teaches a method and program for performing a two-phase commit with a coordinator that performs no logging whatsoever. (See Cotner, Title). This precondition, that the coordinator has no log whatsoever, is evident in Figure 4 of Cotner where only the DBMS of machines 42, 43, and 44 have Logs 428, 438, and 448 respectively. The coordinator, 410, associated with machine 41 has no logging capability at all. This is the premise and basic operating principle of Cotner.

Cotner, at col. 8, lines 56-67 teaches:

"FIG. 4 shows the system environment in performing a two-phase commit at a client without a log. *A client 410 resides on a personal computer at node 41, where there is no local DBMS that has a log* and where the client can connect to many different DBMS servers 42,

43. In the preferred embodiment, no DBMS server 42, 43 can be designated as the coordinator. Before the *coordinator 410* at the client 41 initiates the two-phase commit protocols, a connected DBMS server 43 is chosen to perform resynchronization on behalf of the coordinator 410 in the event of a failure. The coordinator 410 migrates the resynchronization responsibilities to the DBMS server 43 by sending a migrate message."

Cotner establishes that the lack of log storage at the client is an important aspect of the Cotner invention. Cotner at col. 7, lines 51-60 teach:

"As shown in FIG. 4, the application requester 410 is an application running on a personal computer 411, such as an IBM PS/2 having a display 412, keyboard 413, cpu 414, memory 415, storage such as hard drives 416 and a communication port 417. *For this invention, the client machine does not have any local resources, i.e. database files or records, to manage, protect, or maintain.* The DBMS servers are computer systems which have access to external storage 426, 436, 446 for storing the database and storage 428, 438, 448 for maintaining a log." (Cotner, col. 7, lines 51-60).

Although Cotner states in col. 7, line 63- col 8, lines 8 that various changes can be made to the system environment, Cotner gives examples that only include variations to the DBMS servers; thus Cotner maintains the precondition that the client machine, as shown in Figure 4, has no database files or records to manage, protect or store because the client has no such resources. Cotner identifies the Figure 4 application requestor 410 as the coordinator. (See col. 8, line 62).

The present Office Action at pages 4-5 states:

"Cotner teaches a called component of a plurality of called components receiving calls from the calling component module, wherein a contract between the calling component module and the called component requires the called component to guarantee persistence of its last return message to the calling component module until released by receiving a second message from the calling component module, wherein the calling component sends the first message [without logging the first message to the log storage device]." (Office action, page 4)

Applicant respectfully disagrees because Cotner explicitly describes a system having no log storage for the coordinator personal computer whereas Claim 1 relies on log storage in

the calling component. In addition, the Office Action selectively picks out col. 10, lines 17-35 which relates only to the "Second Phase of Commit" of Cotner. Applicant respectfully submits that in order to use the second phase of a two phase commit, a first phase must logically also be addressed. However, the first phase of commit requires that before the coordinator 410 (without a log storage capability per Cotner) initiates the two-phase commit, a DBMS server must be selected to perform resynchronization on behalf of the coordinator according to col. 9 lines 13-18. Applicant notes that the necessary precondition, no log storage in the coordinator, and the selection of a resynchronization DBMS server, although required in Cotner, are not even functions of the elements of amended Claim 1 because Claim 1 does not require these functions as Cotner does.

Whereas Cotner requires that a client have no log server (Cotner, Title and Figure 4), Lomet requires that a log buffer be used in both the client and server (Lomet, col. 4, lines 54-64), Whereas Cotner requires that a coordinator select a DBMS to act as a resynchronization device on behalf of the coordinator, Lomet requires no such external resynchronization device for the client. Applicant respectfully concludes that the combination of Lomet and Cotner are incompatible by structure limitations imposed by the disclosures themselves. Thus, their combined functions cannot result in the functionality of the pending Claim 1 which has different structural and functional elements. Further, since the teachings of Lomet and Cotner are incompatible in both structural and functional combination, then one of skill in the art would not be motivated to combine the two divergent teachings to arrive at the claimed invention recited in amended Claim 1. Generally, an inoperable combination cannot be used as a basis for forming a prima facie case of obviousness under 35 USC §103(a) because one of skill in the art would not be expected to combine two references to achieve non-functional results.

Since the principle of operation of Cotner is to utilize a client without a log storage device, and the principle of operation of Lomet is to utilize a client that has a storage device. Then the addition of the teachings of Cotner to the teachings of Lomet would change the principle of operation of Lomet in violation of MPEP §2143.01 Part VI.

Also, Cotner, in requiring a client without a log storage device teaches away from the claimed invention which explicitly has a log storage device in a client/calling device.

Applicant respectfully submits that the combination of Lomet and Cotner fails to render obvious the amended Claim 1 due to any one of the combination faults discussed above. Independent Claims 11 and 25, although different in scope, also contain elements which drive against the combination of Lomet and Cotner.

Claims 2 and 4 as well stand rejected pursuant to 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 6,182,086 to Lomet et al. (Lomet) in view of U.S. Patent No. 5,884,327 to Cotner et al. (Cotner) in further view of U.S. Patent no. 6,401,136 to Britton et al. (Britton). Applicant respectfully traverses the rejection.

Claims 2 and 4 are dependent on amended independent Claim 1. As discussed above, the combined teaching of Lomet and Cotner fails to render obvious pending independent Claim 1. The addition of Britton fails to cure the deficiency in the combined teaching. Accordingly, Claims 2 and 4 also cannot be rendered obvious under the combination.

Claims 15, and 22-23 stand rejected pursuant to 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 7,152,180 to Shoaib et al. (Shoaib) in view of U.S. Patent No. 5,884,327 to Cotner et al. (Cotner). Applicant respectfully traverses the rejection.

Shoaib teaches a configurable reliable messaging system. The configurable reliable messaging system comprises a communication subsystem capable of configurably transmitting and receiving a message across a network using at least one of a plurality of network links, a plurality of internet protocols and a plurality of transport protocols. The configurable reliable messaging system also comprises a reliability subsystem capable of configurably logging the message, detecting a plurality of failures, notifying a remote entity interconnected with the configurable reliable messaging system via the network of the plurality of failures, and recovering from the plurality of failures. (See Shoaib, Abstract)

The teaching of Cotner are described above. Claim 15 is amended to include ther aspect that the calling component has a log storage device. As discussed above, Cotner requires that the coordinator 410 be without log storage capability which is contrary to the elements of amended Claim 15. Thus, the combination of Shoaib and Cotner teaches away from the claimed invention by forcing the generation of a structure without a log in the calling component of Claim 15. As a result the combination of Shoaib and Cotner does not

form a prima facie case of obviousness under 35 USC §103(a) because Cotner has a configuration that changes Shoaib to be without a logging device at the client and this does not result in the claimed invention of Claim 15 which includes a log storage device at the calling component.

Claim 21 stands rejected pursuant to 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 7,152,180 to Shoaib et al. (Shoaib) in view of U.S. Patent No. 5,884,327 to Cotner et al. (Cotner) and in further view of US Patent No. 6,684,223 to Ganesh et al. (Ganesh). Applicant respectfully traverses the rejection.

Claim 21 is dependent on amended independent Claim 15. As discussed above, the combined teaching of Shoaib and Cotner fails to render obvious pending independent Claim 15. The addition of Ganesh fails to cure the deficiency in the combined teaching. Accordingly, Claim 21 also cannot be rendered obvious under the combination.

## Conclusion

Applicant respectfully submits that all pending claims patentably define over the cited art. Applicants respectfully request reconsideration and withdrawal of the rejections. A Notice of Allowance for all pending claims is requested.

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Respectfully submitted,

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